Understanding Motivations for Sustainable Behaviour: Exploring Influences and Effective Communication Strategies for Reusable Cup Use

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Executive Summary

Introduction

There is limited understanding of the motivation and thoughts that drive pro-environmental behaviour, and how these choices can be influenced or changed is just as poorly understood. The current study analyzes individuals' motivations for adopting the use of reusable cups across five motivational categories: financial, environmental, peer use, social desirability, and convenience. Further, it analyzes which format of the infographic is most effective in conveying information; text-oriented (i.e., primarily composed of text) or imagery-oriented (i.e., primarily composed of images).

Research Questions

The study comprised two research questions to account for both concepts. First, *what is the key factor that most strongly influences motivation among individuals to use reusable cups*? Second, *which type of infographic, text-oriented or imagery-oriented, enhances an individual's motivation to use reusable cups the most?*

Methods

A Qualtrics survey was administered to individuals in the Vancouver area to analyze their motivations for reusable cup use, as well as their responses to the infographic format.

Results

The study found that imagery-oriented infographics improved the motivation towards reusable cups. Text-oriented infographics did not change motivation significantly beyond baseline control values. Furthermore, the study found that financial and convenience motivators were the most effective targets when promoting reusable cup use.

Recommendations

When creating infographics aimed at promoting the usage of reusable cups, prioritizing visual elements for conveying information is recommended to enhance attention-grabbing potential and motivation for adoption. Conversely, textual content should be minimized. Finally, a promotional strategy emphasizing reusable cups' financial and convenience advantages will likely generate a significant surge in motivation toward reusable cups.

Table of Contents

Introduction

Traditional environmental theory proposes that environmental knowledge leads to environmental concern, leading to pro-environmental behaviours (Kollmuss & Agyeman, 2002). However, empirical evidence reveals a discrepancy termed the attitude-behaviour gap, indicating that factors beyond knowledge and concern influence pro-environmental behaviours (Kollmuss & Agyeman, 2002). Several theories try to explain this gap, one being that pro-environmental motives may conflict with other motives such as self-interest, finances, or personal convenience (Kollmuss & Agyeman, 2002; Evans et al., 2012; Vieria et al., 2023). While Kollmuss and Agyeman (2002) maintain that financial advantages may effectively motivate pro-environmental choices, convenience may also be a powerful influence for adopting (or not adopting) pro-environmental behaviour. Farjam et al. (2019) found that individuals will often choose low-cost actions but avoid higher-cost actions that are inconvenient to them despite their greater potential for environmental protection. Despite this potential conflict, research has shown that targeting an audience with environmental motivators alone is still an effective strategy. Evans et al. (2012) found that providing people with environmental information about car-sharing caused an increase in recycling. Further, they found that playing to altruistic motives (i.e., protecting the environment) increased pro-environmental behaviour, whereas focusing on self-interested motives (i.e., financial benefits) did not significantly affect behaviour (Evans et al., 2012). A recent study in a Vancouver office building found that visual-based signage (e.g., a picture of a marine animal trapped in plastic debris) led to a 17.1% reduction in plastic waste (Luo et al., 2022). While priming environmental motivators, visual interventions, and dynamic social norms prove effective, addressing financial and convenience barriers is also crucial.

Research Question and Hypothesis

The current study aims to examine which key factors (environmental, financial, peer use, social desirability, and personal convenience) contribute the most to increased self-reported motivation to adopt the use of reusable cups. Additionally, we aim to examine whether this motivation increases, decreases, or changes in nature depending on whether the information is presented in a text-based or image-based format (i.e., more likely to be motivated by environmental factors when exposed to image-based conditions, or more likely to be motivated by financial factors when exposed to the text-based condition). Based on these research questions, we formulated two hypotheses. Regarding participants' motivations, we hypothesized that participants exposed to imagery-oriented infographics would be more motivated overall than those in the control and text-oriented groups. Further, we hypothesized that participants exposed to imagery-oriented infographics would be more likely to be motivated by environmental factors, whereas those exposed to text-oriented infographics would be more likely to be motivated by financial factors.

Methods

Participants

In total, we aimed to recruit N = 246 respondents based on a minimum effect size = 0.02, alpha = 0.05, power = 0.8, and 3 between-subjects conditions. By the end of the study, we recruited 124 respondents, which was below our intended participation rate. Of these respondents, the mean age was 22.82 (SD: 4.48). 43.3% of respondents identified themselves as UBC students. 40 respondents identified as men, 47 identified as women, and 8 identified as non-binary. The remaining 29 respondents did not disclose their gender identity. Of the 124 participants, 24 had to be removed as their responses were not valid as they did not complete the entire questionnaire, meaning we had a final sample size of 100.

Conditions

The study was a between-subjects research design, with each participant randomly assigned to one of the following three conditions. First, the imagery-based condition (N = 32), where participants were shown an infographic primarily composed of images that highlighted the environmental, financial, social, and personal convenience-related benefits of reusable cup use. Second, the text-based condition (N = 31), where participants were shown an infographic primarily composed of text which highlighted the same motivators as the imagery condition. Third, we included a control group (N = 37) in which participants were shown an unrelated infographic: exam studying tips. *See Appendix A for infographics.* Our independent variable was the infographic condition that participants were assigned to. Thus, the control group aimed to assess participants' sentiments regarding using reusable cups at baseline without the influence of informational infographics that could potentially bias their initial baselines.

Measures

The study had two dependent variables: 1) participants' motivations and 2) response to infographic format. In application to our hypothesis, this study aimed to analyze what participants' primary motivations were for adopting the use of reusable cups, as well as analyze which type of infographic format promoted pro-cup use behaviours. The study used a survey to measure both of these variables. We formulated our questions in a multiple-choice structure to gather data specifically tailored for specific motivational assessments, rather than allowing open-ended questions, which may have yielded vague results.

Procedure

Participants were recruited through word of mouth, quick-response (QR) code posters in the AMS student nest, UBC communal bulletin boards, course canvas announcement pages, as well as through the UBC student subreddit and student-run discord servers. These methods were active over a period of 3 weeks. The survey was administered through a Qualtrics survey. The survey comprised of 3 parts. 1) Random assignment to infographic condition (imagery, text, or control). 2) Questions regarding reusable cup use: "How likely are you to use a reusable cup in your day-to-day life?" (measured on a Likert 1-7 point scale), and "What do you think is the best motivator to promote reusable cup use?" (measured on a drop-down list with the following elements, rated by statements ranging from *strongly disagree* to *strongly agree*: financial incentives, environmental campaigns, peer use, social desirability, and convenience). 3) General demographic questions (i.e., age, gender, and whether or not the participant is a UBC student). There was an optional fourth part of the study where participants could enter a raffle to win a $25 UBC Food Services gift card for their participation. *See Appendix B for full survey questions.*

Results

Summary of Descriptive Statistics Across the Three Conditions

In examining the descriptive statistics for the study, we observed distinct patterns across the three conditions (Text, Photo, and Control) when considering the five dependent variables (financial motivations, environmental motivations, peer motivations, social desirability, and convenience). For financial motivations, participants in the photo condition reported significantly higher mean scores (M = 4.87, SD = 1.57) compared to those in the text (M = 2.59, SD = 1.64) and control (M = 2.57, SD = 1.61) conditions. This trend was consistent across the other variables, with the photo condition yielding the highest mean scores. Peer motivations followed a similar pattern, with the photo condition outperforming the text (M = 2.93, SD = 1.56) and control (M = 2.95, SD = 1.81) conditions with a mean score of (M = 4.26, SD = 1.57). In terms of social desirability, the Photo condition again reported the highest mean (M = 4.32, SD = 1.94), followed by the control (M = 3.60, SD = 2.11) and text (M = 3.31, SD = 1.65) conditions. The convenience variable showed the most significant difference, with the photo condition reporting a mean score of (M = 5.30, SD = 1.68), notably higher than both the text (M = 2.72, SD = 1.94) and control (M = 2.49, SD = 1.66) conditions. Lastly, for environmental motivations, while the photo condition still had the highest mean (M = 4.06, SD = 1.53), the control condition's mean score (M = 3.38, SD = 1.90) was closer to the Photo condition than the text condition (M = 2.97, SD = 1.15), suggesting a more nuanced relationship between the presentation medium and environmental motivations. These results suggest that the medium through which motivations were presented significantly impacted the reported motivation levels. The image condition consistently elicited higher mean scores across all variables.

Summary of Inferential Statistics Across the Three Conditions

The analysis revealed significant effects on several dependent variables. For financial motivations, an F-test showed a highly significant effect, $F(2, 94) = 21.617$, $p < .001$, with a substantial effect size as indicated by an Eta-squared value of .315. This suggests that financial motivations had a strong influence on the outcomes measured. Similarly, peer motivations also demonstrated a significant effect, $F(2, 94) = 6.639$, $p = .002$, albeit with a smaller effect size (Eta-squared = .124), indicating a moderate influence on the results. Social desirability did not reach the conventional level of significance, $F(2, 94) = 2.237$, $p = .112$, with an Eta-squared value of .045, suggesting a minimal impact on the dependent measures. The variable of convenience showed a highly significant effect, $F(2, 94) = 25.109$, $p < .001$, with the largest effect size observed in this study (Eta-squared = .348), highlighting its strong influence on the outcomes. Lastly, environmental motivations had a significant effect, $F(2, 94) = 3.721$, $p = .028$, with an Eta-squared value of .073, indicating a modest but notable influence on the measured results. These findings suggest that while all the considered motivations play a role in the

outcomes, financial and convenience motivators are particularly influential, with Peer and Environmental Motivations also contributing significantly, albeit somewhat. For post-hoc analysis, a Tukey HSD test was conducted to investigate the significant results further. The post hoc analysis using Tukey's HSD test revealed significant differences between conditions for each dependent variable. Participants exposed to photo-oriented infographics showed significantly higher financial motivations compared to text-oriented ($p < .001$) and control ($p = .999$) groups. The text-oriented group reported significantly lower financial motivations compared to the photo-oriented ($p < .001$) and control ($p < .001$) groups. Individuals in the photo-oriented group reported significantly higher peer motivations than text-oriented ($p = .007$) and control ($p = .005$) groups. The text-oriented group showed significantly lower peer motivations than the photo-oriented ($p = .007$) and control ($p = .005$) groups. Participants exposed to photo-oriented infographics demonstrated significantly higher convenience motivations compared to text-oriented ($p < .001$) and control ($p < .001$) groups. Text-oriented groups exhibited significantly lower convenience motivations compared to photo-oriented ($p < .001$) and control ($p < .001$) groups. Participants in the photo-oriented group reported significantly higher environmental motivations compared to the text-oriented ($p = .023$) group. However, no significant difference was observed between photo-oriented and control ($p = .546$) groups. The text-oriented group exhibited significantly lower environmental motivations than the photo-oriented group ($p = .023$). These results confirm the efficacy of photo-oriented infographics in enhancing motivations for reusable cup usage across various factors when compared to text-oriented or no infographics.

Connections to Hypotheses

These findings robustly support our primary hypothesis, indicating a substantial increase in motivation among participants exposed to imagery-oriented infographics compared to text-oriented or control infographics. In regards to the secondary hypothesis, our hypothesis was not confirmed by the study's results. We hypothesized that the text-oriented condition would be most influential through the financial motivator; however, it yielded no significant results across all motivational conditions. These insignificant results matched the results in the control group. Additionally, we hypothesized that the imagery-oriented condition would be most influential through the environmental motivator, yet instead, it yielded equally significant results for the convenience and financial motivators. The peer motivator was also significant, but to a less potent effect.

Discussion

We initiated our analysis with a one-way ANOVA, employing the six motivation questions as dependent variables. The results of this study provide an understanding of individuals' motivations regarding reusable cup use. This was completed by studying text and image-oriented infographic formats, which aimed to examine which format was more effective in communicating information while promoting increased use of reusable cups. Moreover, our main finding displays that the photo-based condition significantly enhanced motivation for usage in comparison to the text-based and control conditions, which didn't yield as significant of results. These findings correlate with and reiterate the results displayed through prior research conducted by Luo et al. (2022), which similarly found a correlation between visual cues in promoting environment support initiatives. These findings are important to recognize as they depict how environmental sustainability can be promoted by implementing image- and text-based signage, specifically when environmental concerns, financial factors, social norms, peer influence, and personal conveniences are accounted for. Overall, the current study uses previous research as a foundation for these newfound findings. By specifically comparing various types of motivations, this research allows for the enhancement in understanding of what is most effective in promoting reusable cup usage. However, this study does have limitations that can be mitigated in future research. When conducting the study through the Qualtrics survey, the intended sample size of 246 was not met, as only 124 respondents were recorded. Of those participants, only 100 were valid, as some participants did not fully complete the survey. This has implications for the generalizability of our study, thus future research can provide a larger sample size. Moreover, the study was conducted through self-report measures, which may hold some inaccuracies when attempting to capture accurate human behavior. Thus, future research could aim to measure objective measures of behavior. Overall, these findings provide a basis for understanding what influences motivation for reusable cup usage, allowing for the implementation of strategies, both visual and text-based, to increase measures of sustainability.

Recommendations

This study's findings indicate that extensive imagery utilization yields a greater motivational impact. As such, when creating infographics aimed at promoting the usage of reusable cups, prioritizing visual elements for conveying information is recommended to enhance attention-grabbing potential and motivation for adoption. Conversely, textual content should be minimized as it proves less effective in motivating behaviour and may not effectively maintain viewer engagement. Furthermore, a promotional strategy emphasizing reusable cups' financial and convenience advantages will likely generate a significant surge in motivation toward reusable cups. Hence, campaigns focusing on disseminating knowledge and raising awareness about these benefits are most effective in enhancing motivation towards environmentally conscious behaviours. Overall, these suggestions can be used by UBC Seeds and the AMS to create effective signage on campus.

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APPENDIX A: Infographics

Text-Oriented Condition	Imagery-Oriented Condition	Control Condition

USING REUSABLE CUPS

WHAT'S YOUR MOTIVATION?

Environmental Influence

In Vancouver, 2.6 million disposable cups are thrown away every week.

Single-use cups make up 22% of city litter in Vancouver.

Throwing away 1 disposable cup per day for a year adds up to 23lbs of waste– that's roughly the weight of a human toddler, 2 cats, or 23 soccer balls.

Financial Influence

Most coffee shops add a 25¢ tax to each disposable cup of coffee purchased.

Buying one disposable cup of coffee a day for a year adds up to $91.25 per year– equivalent to the cost of ~16 medium lattes.

After 3 years, that adds up to $274.75 (or 48 medium lattes).

Convenience Influence

Reusable insulated cups keep drinks cold/warm for far longer than paper or plastic reusable cups.

As opposed to ~20 minutes, well-insulated cups can keep drinks warm for hours!

Social Influence

Between 2019 and 2022, the number of people who reported regularly using a reusable mug increased by 9%

Currently, 28% of people in BC report regularly using a reusable coffee mug– but that number is steadily rising

Over 80% of Vancouver residents agree that adopting reusable containers and cups is an important step in reducing our individual negative environmental impact

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USING REUSABLE CUPS

WHAT'S YOUR MOTIVATION?

1. Environmental Influence

Better for the planet!

2. Financial Influence

The cost adds up!

25¢

3. Convenience Influence

Keeps drink warm (or cold) longer!

4. Social Influence

Friend and family encouragement

TIPS FOR EXAM SUCCESS

STUDYING FOR MIDTERMS

1. Create a clean, organized environment

Before you begin to study, organize your space. Don't leave anything out that may distract you from what you need to be focusing on..

2. Make a schedule

A week before your exam, write out a schedule with everything you need to review, and break it up across the days so you don't get too overwhelmed closer to the date!

3. Take care of yourself

Although exams can be overwhelming, it's important to be good to your body. Eat, stay hydrated, and get a good nights rest.

4. Go to office hours / exam reviews!

If your professor offers it, office hours are excellent ways to get clarification on any material you may need help with. Exam reviews are great opportunities to hear other students' questions as well which in turn, can help you!

APPENDIX B: Survey Questions

Consent Form Agreement

Question 1: *Do you agree to participate in this questionnaire?*
Answer Yes/No

Research Study Questions

Question 2: *How likely are you to use a reusable cup in your day to day life?*
Slide to the best response → 1 (extremely unlikely) to 7 (extremely likely)

Question 3: *What do you think is the best motivator to promote reusable cup use?*
Participants will select either strongly agree, agree, somewhat agree, neither agree or disagree, somewhat disagree, strongly disagree for each of the following categories:
- Financial Incentives (e.g, receiving discounts on beverages when bringing in a reusable cup)
- Environmental Campaigns (e.g, posters, infographics, social events)
- Peer Use (e.g, friends/family use reusable cups)
- Social Desirability (e.g, cup is trendy)
- Convenience (e.g, bringing beverage from home instead of taking time to go to a cafe, keeps drink warm/cold longer)

Demographic Questions

Question 4: *What is your age? Please specify numerically (e.g, 20).*

Question 5: *Are you currently enrolled at UBC as a student?*
(Answer Yes/No)

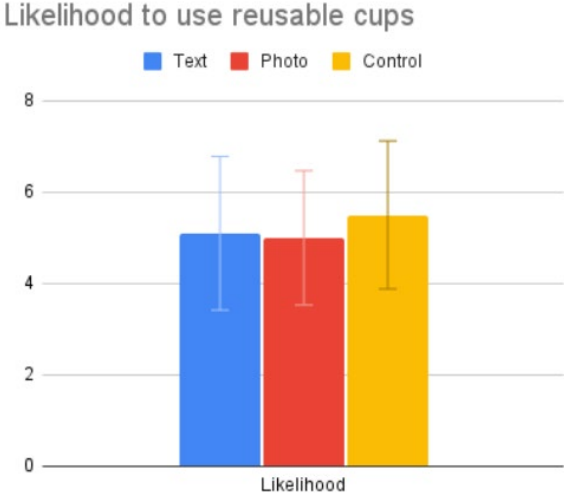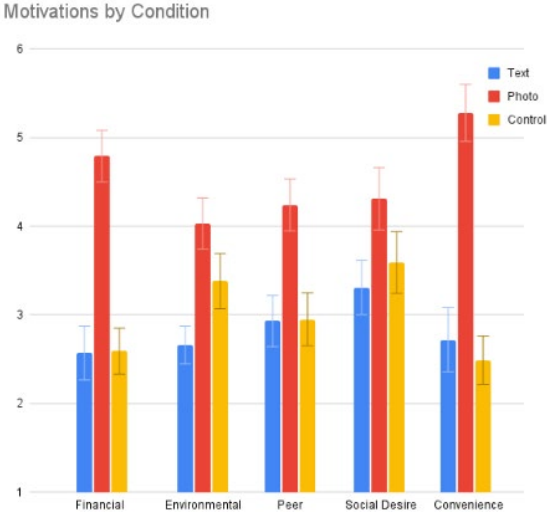Question 6: *What is your gender?*
Participants will select one of the following categories:
- Man
- Woman
- Non-Binary
- Other, please specify: _____
- Prefer not to say

APPENDIX C: Tables and Diagrams

This graph indicates the mean reported likelihood to use reusable cups by condition.

This graph indicates the mean reported motivation value by condition for each of the motivating factors.

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Likelihood	Text	29	5.1034	1.67641	.31130	4.4658	5.7411	2.00	7.00
	Photo	30	5.0000	1.41421	.25820	4.4719	5.5281	2.00	7.00
	Control	37	5.5405	1.62608	.26733	4.9984	6.0827	1.00	7.00
	Total	96	5.2396	1.58110	.16137	4.9192	5.5599	1.00	7.00
Financial	Text	29	2.5862	1.63701	.30399	1.9635	3.2089	1.00	7.00
	Photo	31	4.8710	1.56508	.28110	4.2969	5.4450	2.00	7.00
	Control	37	2.5676	1.60798	.26435	2.0314	3.1037	1.00	7.00
	Total	97	3.3093	1.91682	.19462	2.9230	3.6956	1.00	7.00
Peer	Text	29	2.9310	1.55681	.28909	2.3389	3.5232	1.00	6.00
	Photo	31	4.2581	1.56988	.28196	3.6822	4.8339	1.00	7.00
	Control	37	2.9459	1.80963	.29750	2.3426	3.5493	1.00	7.00
	Total	97	3.3608	1.75704	.17840	3.0067	3.7149	1.00	7.00
Social_Desire	Text	29	3.3103	1.64975	.30635	2.6828	3.9379	1.00	7.00
	Photo	31	4.3226	1.93885	.34823	3.6114	5.0338	1.00	7.00
	Control	37	3.5946	2.11423	.34758	2.8897	4.2995	1.00	7.00
	Total	97	3.7423	1.95405	.19840	3.3484	4.1361	1.00	7.00
Convenience	Text	29	2.7241	1.94379	.36095	1.9848	3.4635	1.00	7.00
	Photo	31	5.2903	1.67717	.30123	4.6751	5.9055	1.00	7.00
	Control	37	2.4865	1.66035	.27296	1.9329	3.0401	1.00	7.00
	Total	97	3.4536	2.15068	.21837	3.0202	3.8871	1.00	7.00
Environmental	Text	29	2.9655	1.14900	.21336	2.5285	3.4026	1.00	6.00
	Photo	31	4.0645	1.52612	.27410	3.5047	4.6243	1.00	6.00
	Control	37	3.3784	1.89079	.31084	2.7480	4.0088	1.00	7.00
	Total	97	3.4742	1.62720	.16522	3.1463	3.8022	1.00	7.00

This is the SPSS chart of our descriptive statistics.

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Likelihood	Based on Mean	.826	2	93	.441
	Based on Median	.298	2	93	.743
	Based on Median and with adjusted df	.298	2	91.897	.743
	Based on trimmed mean	.788	2	93	.458
Financial	Based on Mean	.016	2	94	.984
	Based on Median	.028	2	94	.973
	Based on Median and with adjusted df	.028	2	89.852	.973
	Based on trimmed mean	.014	2	94	.986
Peer	Based on Mean	.188	2	94	.829
	Based on Median	.010	2	94	.990
	Based on Median and with adjusted df	.010	2	79.135	.990
	Based on trimmed mean	.118	2	94	.889
Social_Desire	Based on Mean	1.968	2	94	.146
	Based on Median	1.803	2	94	.170
	Based on Median and with adjusted df	1.803	2	90.015	.171
	Based on trimmed mean	2.048	2	94	.135
Convenience	Based on Mean	.671	2	94	.513
	Based on Median	.271	2	94	.763
	Based on Median and with adjusted df	.271	2	90.650	.763
	Based on trimmed mean	.578	2	94	.563
Environmental	Based on Mean	4.346	2	94	.016
	Based on Median	1.961	2	94	.146
	Based on Median and with adjusted df	1.961	2	83.696	.147
	Based on trimmed mean	3.795	2	94	.026

This is the SPSS chart of the results from the tests of homogeneity of variances.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Likelihood	Between Groups	5.611	2	2.805	1.125	.329
	Within Groups	231.879	93	2.493		
	Total	237.490	95			
Financial	Between Groups	111.122	2	55.561	21.617	<.001
	Within Groups	241.599	94	2.570		
	Total	352.722	96			
Peer	Between Groups	36.682	2	18.341	6.639	.002
	Within Groups	259.689	94	2.763		
	Total	296.371	96			
Social_Desire	Between Groups	16.657	2	8.328	2.237	.112
	Within Groups	349.900	94	3.722		
	Total	366.557	96			
Convenience	Between Groups	154.618	2	77.309	25.109	<.001
	Within Groups	289.423	94	3.079		
	Total	444.041	96			
Environmental	Between Groups	18.646	2	9.323	3.721	.028
	Within Groups	235.539	94	2.506		
	Total	254.186	96			

This is the SPSS chart of our ANOVA results.

ANOVA Effect Sizes[a,b]

		Point Estimate	95% Confidence Interval	
			Lower	Upper
Likelihood	Eta-squared	.024	.000	.098
	Epsilon-squared	.003	-.022	.079
	Omega-squared Fixed-effect	.003	-.021	.078
	Omega-squared Random-effect	.001	-.011	.041
Financial	Eta-squared	.315	.159	.437
	Epsilon-squared	.300	.142	.425
	Omega-squared Fixed-effect	.298	.140	.422
	Omega-squared Random-effect	.175	.075	.267
Peer	Eta-squared	.124	.019	.241
	Epsilon-squared	.105	-.002	.225
	Omega-squared Fixed-effect	.104	-.002	.223
	Omega-squared Random-effect	.055	-.001	.126
Social_Desire	Eta-squared	.045	.000	.137
	Epsilon-squared	.025	-.021	.118
	Omega-squared Fixed-effect	.025	-.021	.117
	Omega-squared Random-effect	.013	-.010	.062
Convenience	Eta-squared	.348	.190	.467
	Epsilon-squared	.334	.173	.456
	Omega-squared Fixed-effect	.332	.172	.453
	Omega-squared Random-effect	.199	.094	.293
Environmental	Eta-squared	.073	.000	.178
	Epsilon-squared	.054	-.021	.160
	Omega-squared Fixed-effect	.053	-.021	.159
	Omega-squared Random-effect	.027	-.010	.086

a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.

b. Negative but less biased estimates are retained, not rounded to zero.

This is the SPSS chart of the ANOVA effect sizes.

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Likelihood	Text	Photo	.10345	.41120	.966	-.8760	1.0829
		Control	-.43709	.39162	.507	-1.3699	.4957
	Photo	Text	-.10345	.41120	.966	-1.0829	.8760
		Control	-.54054	.38794	.349	-1.4645	.3835
	Control	Text	.43709	.39162	.507	-.4957	1.3699
		Photo	.54054	.38794	.349	-.3835	1.4645
Financial	Text	Photo	-2.28476*	.41417	<.001	-3.2711	-1.2985
		Control	.01864	.39761	.999	-.9282	.9655
	Photo	Text	2.28476*	.41417	<.001	1.2985	3.2711
		Control	2.30340*	.39035	<.001	1.3738	3.2330
	Control	Text	-.01864	.39761	.999	-.9655	.9282
		Photo	-2.30340*	.39035	<.001	-3.2330	-1.3738
Peer	Text	Photo	-1.32703*	.42940	.007	-2.3496	-.3045
		Control	-.01491	.41223	.999	-.9966	.9668
	Photo	Text	1.32703*	.42940	.007	.3045	2.3496
		Control	1.31212*	.40470	.005	.3484	2.2759
	Control	Text	.01491	.41223	.999	-.9668	.9966
		Photo	-1.31212*	.40470	.005	-2.2759	-.3484
Social_Desire	Text	Photo	-1.01224	.49843	.110	-2.1992	.1747
		Control	-.28425	.47850	.824	-1.4237	.8552
	Photo	Text	1.01224	.49843	.110	-.1747	2.1992
		Control	.72799	.46977	.273	-.3907	1.8467
	Control	Text	.28425	.47850	.824	-.8552	1.4237
		Photo	-.72799	.46977	.273	-1.8467	.3907
Convenience	Text	Photo	-2.56618*	.45331	<.001	-3.6457	-1.4867
		Control	.23765	.43519	.849	-.7987	1.2740
	Photo	Text	2.56618*	.45331	<.001	1.4867	3.6457
		Control	2.80384*	.42724	<.001	1.7864	3.8213
	Control	Text	-.23765	.43519	.849	-1.2740	.7987
		Photo	-2.80384*	.42724	<.001	-3.8213	-1.7864
Environmental	Text	Photo	-1.09900*	.40894	.023	-2.0729	-.1251
		Control	-.41286	.39259	.546	-1.3478	.5221
	Photo	Text	1.09900*	.40894	.023	.1251	2.0729
		Control	.68614	.38543	.182	-.2317	1.6040
	Control	Text	.41286	.39259	.546	-.5221	1.3478
		Photo	-.68614	.38543	.182	-1.6040	.2317

*. The mean difference is significant at the 0.05 level.

This is the SPSS chart of our Tukey's post hoc tests.